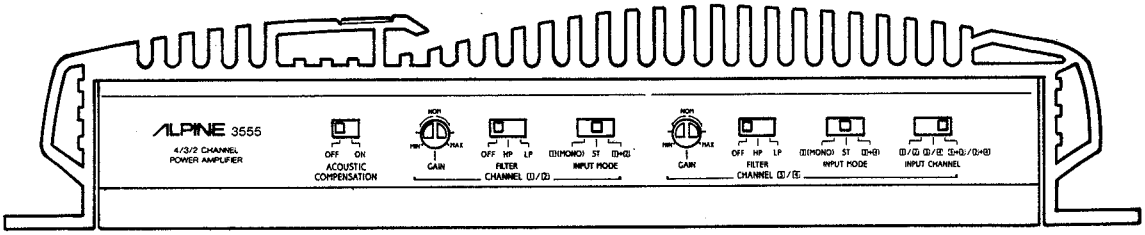
ALPINE SERVICE MANUAL

4/3/2 Channel Power Amplifier



3555

Contents

Specifications 2
Features 3
Switches and Terminals ..... 4 to 5
Connections ..... 5 to 6
Switch Settings ..... 7 to 9
Characteristic Curves 9
Disassembly Instructions 10
Block Diagram ..... 11 to 12
Parts Layout on P.C.Boards and Wiring Diagram ..... 14 to 16
Schematic Diagram (1/2) ..... 17 to 20
Schematic Diagram (2/2) ..... 21 to 24
Electrical Parts List ..... 25 to 28
Packing Assembly Parts List 29
Packing Method View 29
Cabinet Assembly Parts List 30
Exploded View (Cabinet) ..... 31 to 32
Semi-Conductor Lead Identifications ..... 33 to 34

Additional Schematic Diagram Inserted.

Specifications

Power Source	14.4V DC (11~16V)
Current Drain (No Signal)	3A
Power Output (20Hz~20kHz)	0.08% T.H.D. Load 4ohm×4 : 45W
	0.8% T.H.D. Load 2ohm×4 : 65W
	0.8% T.H.D. Load 4ohm×2 at BTL : 130W
Input Sensitivity (at 50W output)	0.1~2V±2dB
Input Impedance	20±2kohm
Frequency Response (at-1dB)	20Hz~40kHz
S/N Ratio	100dB
Residual Noise	0.14mA
Semiconductors	IC's 17, Transistors 51, Diodes 17, Zener Diodes 5
Dimensions (W×H×D)	285×55×300mm
Weight	4kg

Note : Due to continuing product improvement, specifications and design are subject to change without notice.

FEATURES

- **4/3/2-CHANNEL OPERATION**
  The 3555 can be used in as:
  a. 4-channel amplifier, producing 50W per channel into 4 Ω, or 75W per channel into 2 Ω.
  b. 3-channel amplifier, producing 50W (4 Ω) or 75W(2 Ω) into channels 1 & 2, and 150W (4 Ω) into the third channel.
  c. 2-channel amplifier, producing 150W per channel into 4 Ω.

- **STATUS MONITOR**
  This indicator illuminates in green when the amplifier is on and operational. This light will turn orange if any internal protection circuitry is activated.

- **ACTIVE DIVIDING NETWORK**
  A pair of built-in, switchable and independent electronic crossover networks at 80Hz, 18dB per octave, can be used to set up the amplifier for low-pass (subwoofer) or high-pass (tweeter/midrange satellite) applications. These networks can also be switched off to allow full-range signal amplification.

- **ACOUSTIC COMPENSATION CIRCUITRY**
  A selectable (Off or On) equalization curve can be added to the amplifier's output signal, compensating for the inherent non-linearities of the automobile interior. It extends low bass response and eliminates mid-bass boominess, giving the low frequency response of the audio system tightness and accuracy.

- **DUO-ß FEEDBACK CIRCUITRY**
  Alpine's proprietary Duo-Beta is a technologically advanced from of feedback circuitry. Duo-Beta supplies low negative feedback throughout the audio frequency bandwidth and very high negative feedback at DC.
  This stabilizes the amplifier, removes DC offset, and offers excellent total harmonic distortion (T.H.D.) characteristics. It also provides low transient intermodulation distortion (T.I.M.), excellent slew rate, stability, and musicality.

- **NO CURRENT LIMITING**
  Absence of current limiters in the audio section ensures low T.I.M., excellent transient response, and superb sonic quality.

- **S.T.A.R. CIRCUITRY**
  The Alpine-developed Signal Transit for Accurate Response circuit topology improves sonic properties by reducing interaction between different sections of the circuitry.

FEATURES

- **INPUT MODE SELECTOR**
  This switch allows the user to specify the input signal entering the amplifier.

- **INPUT CHANNEL SELECTOR**
  This switch allows the user to specify the input signal entering channels 3 and 4 of the amplifier.

- **DC-TO-DC SWITCHING MODE POWER SUPPLY**
  Provides excellent power output throughout the audio bandwidth (20Hz to 20kHz), It soft clipping characteristics ensure superb transient response and musicality.

- **FULLY DISCRETE, COMPLEMENTARY OUTPUT CIRCUITRY**
  For excellent reliability, superb sonic performance and high current capability for accurate transient response.

- **INDEPENDENT, CONTINUOUSLY ADJUSTABLE GAIN CONTROLS FOR CH1/2 AND CH3/4**
  Allow different level settings for both pairs of channels.

- **GOLD-PLATED RCA INPUT CONNECTORS**
  For most accurate signal transmission and lowest possible loss. Gold-plated terminals are immune to signal deterioration caused by corrosion in the connectors that can develop over time.

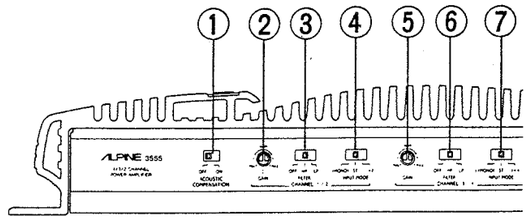
- **GOLD-PLATED, SCREW-DOWN POWER AND SPEAKER TERMINALS**
  For high definition, minimum loss power transfer and oxidization resistance.

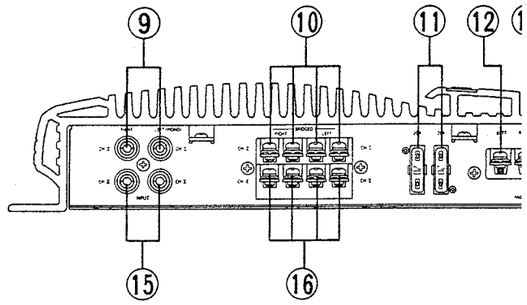
- **HIGH PERFORMANCE, LOW NOISE, AUDIOPHILE QUALITY ACTIVE AND PASSIVE COMPONENTS**
  For best possible performance and consistency from unit to unit.

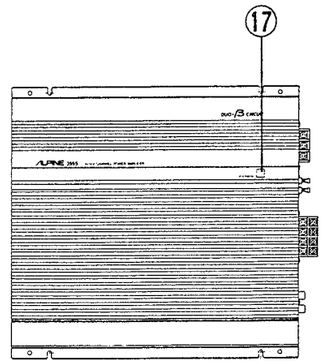
- **THIRD-ORDER, (18 dB PER OCTAVE) CAPACITIVE/INDUCTIVE POWER SUPPLY INPUT AND OUTPUT FILTERING**
  Prevents radio frequency interference (RFI) and immunity to system noises (such as alternator whine).

- **EXTRA HEAVY DUTY CONSTRUCTION**
  Glass-epoxy printed circuit boards and separate high current power transfer bus-bars for primary voltage and ground connections inside the amplifier.

SWITCHES AND TERMINA







FEATURES

INPUT MODE SELECTOR
This switch allows the user to specify the input signal entering the amplifier.

INPUT CHANNEL SELECTOR
This switch allows the user to specify the input signal entering channels 3 and 4 of the amplifier.

DC-TO-DC SWITCHING MODE POWER SUPPLY
Provides excellent power output throughout the audio bandwidth (20Hz to 20kHz), It soft clipping characteristics ensure superb transient response and musicality.

FULLY DISCRETE, COMPLEMENTARY OUTPUT CIRCUITRY
For excellent reliability, superb sonic performance and high current capability for accurate transient response.

INDEPENDENT, CONTINUOUSLY ADJUSTABLE GAIN CONTROLS FOR CH1/2 AND CH3/4
Allow different level settings for both pairs of channels.

GOLD-PLATED RCA INPUT CONNECTORS
For most accurate signal transmission and lowest possible loss. Gold-plated terminals are immune to signal deterioration caused by corrosion in the connectors that can develop over time.

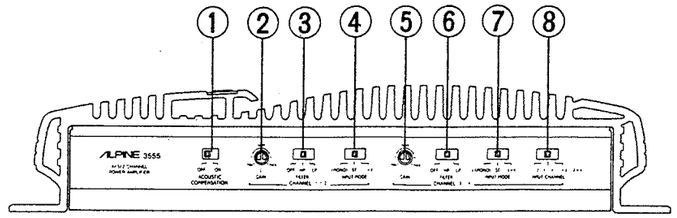
GOLD-PLATED, SCREW-DOWN POWER AND SPEAKER TERMINALS
For high definition, minimum loss power transfer and oxidization resistance.

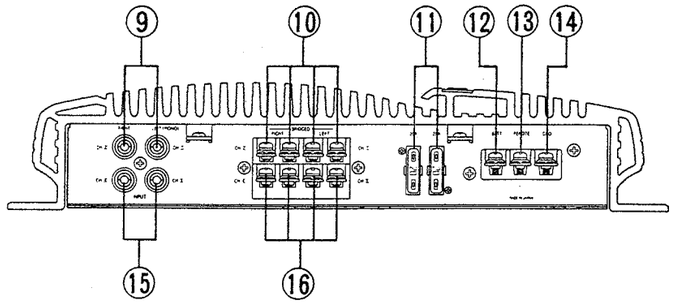
HIGH PERFORMANCE, LOW NOISE, AUDIOPHILE QUALITY ACTIVE AND PASSIVE COMPONENTS
For best possible performance and consistency from unit to unit.

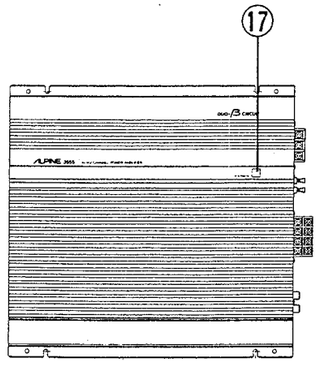
THIRD-ORDER, (18 dB PER OCTAVE) CAPACITIVE/INDUCTIVE POWER SUPPLY INPUT AND OUTPUT FILTERING
Prevents radio frequency interference (RFI) and immunity to system noises (such as alternator whine).

EXTRA HEAVY DUTY CONSTRUCTION
Glass-epoxy printed circuit boards and separate high current power transfer bus-bars for primary voltage and ground connections inside the amplifier.

SWITCHES AND TERMINALS







SWITCHES AND TERMINALS

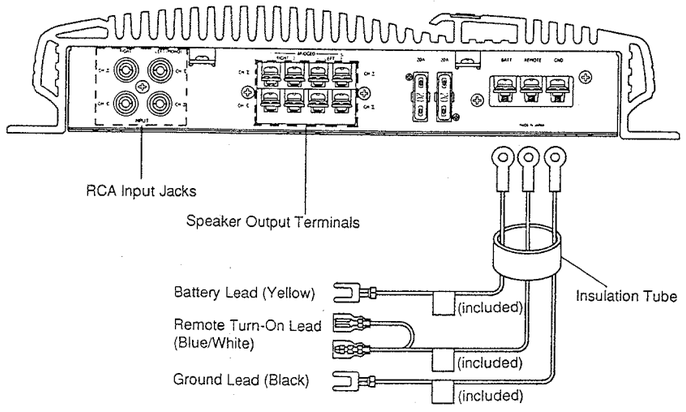
① Acoustic Compensation Switch
② Input Gain Adjustment Control (Channels 1/2)
③ Active Dividing Network Mode Selector Switch (Channels 1/2)
④ Input Mode Selector Switch (Channel 1/2)
⑤ Input Gain Adjustment Control (Channels 3/4)

⑥ Active Dividing Network Mode Selector Switch (Channels 3/4)
⑦ Input Mode Selector Switch (Channels 3/4)
⑧ Input Channel Selector Switch
⑨ RCA Input Jacks (Channels 1/2)
⑩ Speaker Output Terminals (Channels 1/2)

⑪ Fuse Blocks (20 A x 2)
⑫ Battery Lead Terminal
⑬ Remote Turn-On Lead Terminal
⑭ Ground Lead Terminal
⑮ RCA Input Jacks (Channels 3/4)

⑯ Speaker Output Terminal (Channels 3/4)
⑰ Status Monitor

CONNECTIONS



CONNECTIONS

Before making connections, be sure to turn the power off to all audio components. Insulation tubes for the speaker leads and the power supply leads are supplied with the 3555, route the speaker leads and the power supply leads separately through these tubes.

CAUTION:
Always keep the CH 3/4 RCA inputs of the 3555 connected to a signal source while the amplifier is in operation. If CH 3 and 4 inputs are not tied to the signal source, the source and the amp will not have a common ground reference point, and high output distortion may result. This is due to special grounding characteristics that have been implemented in the 3555 to ensure an installation-noise-free operation.

- **Speaker Output Terminals**
  The 3555 has two sets of speaker outputs. Be sure to observe correct speaker output connections and phasing. In the stereo mode connect the right speaker output to the right speaker and the left to left. Connect the positive output to the positive speaker terminal and the negative to negative. In the bridged mode, connect the left positive to the positive terminal on the speaker and the right negative to the negative terminal of the speaker. Do not use the speaker (–) terminal commonly for the right and left speakers or connect it to the vehicle's chassis ground.

  NOTE:
  Do not connect speaker leads together or to chassis ground.

- **RCA Input Jacks**
  Connect these jacks to the line out leads on your head unit using RCA extension cables (sold separately). Be sure to observe correct channel connections; Left to Left, Right to Right, Front to Front, and Rear to Rear.

- **Ground Lead (Black)**
  Connect this lead securely to a clean, bare metal spot on the vehicle's chassis. Verify this point to be a true ground by checking for continuity between that point and the negative (–) terminal of the vehicle's battery. Ground all your audio components to the same point on the chassis to prevent ground loops.

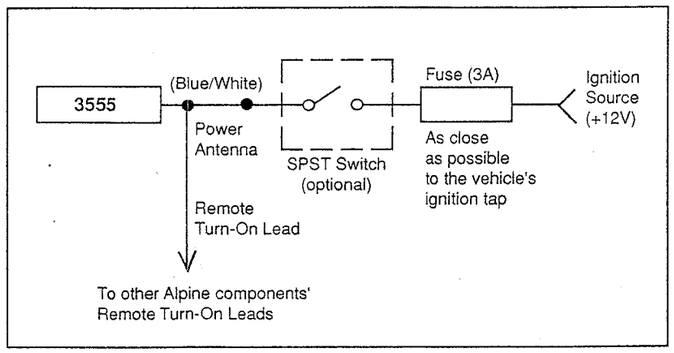
- **Battery Lead (Yellow)**
  Connect this lead directly to the positive (+) terminal of the vehicle's battery. *Do not connect this lead to wiring in the vehicle's electrical system*. Be sure to add a 40 amp (or two 20 A fuses in parallel) as close as possible to the battery's positive (+) terminal. This fuse will protect your vehicle's electrical system in case of a short circuit. If you need to extend this lead, the wire gauge should be 8 AWG or larger.

- **Remote Turn-On Lead (Blue/White)**
  Connect this lead to the remote turn-on or power antenna (positive trigger, (+) 12V only) lead of your head unit.

  Please check your head unit for the conditions listed below:

  a. The head unit does not have a remote turn-on or power antenna lead.
  b. The head unit's power antenna lead is activated only when the radio is on (turns off in the tape or CD Mode).
  c. The head unit's power antenna lead is logic level output (+) 5V, negative trigger (grounding type), or cannot sustain (+) 12V when connected to other equipment in addition to the vehicle's power antenna. If any of the above conditions exist, the remote turn-on lead of your 3555 must be connected to a switched power source (ignition) in the vehicle. Be sure to use a 3A fuse as close as possible to this ignition tap. Using this connection method, the 3555 will turn on and stay on as long as the ignition switch is on.

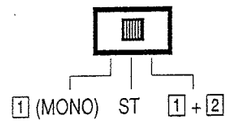
  If this is objectionable, a SPST (Single pole, Single Throw) switch, in addition to the 3A fuse mentioned above, may be installed in-line on the 3555 turn-on lead. This switch will then be used to turn on (and off) the 3555. Therefore, the switch should be mounted so that is accessible by the driver. Make sure the switch is turned off when the vehicle is not running. Otherwise, the amplifier will remain on and drain the battery.



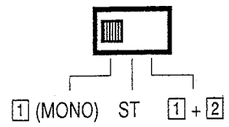
SWITCH SETTINGS

Input Mode Selector Switches ④ and ⑦
The switch modes shown are for CH1/2. Same explanatio
mode selection for CH3/4.

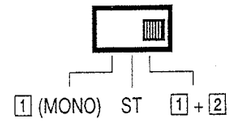
a) Set to the "ST" position (center) when the two channels ai
stereo.



b) Set to the "1 (MONO)" position when the two channels a
channel of a stereo or bridged system.

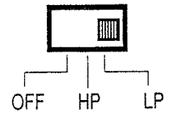


c) Set to the "1 + 2" position when the two channels are u
subwoofer system which uses the right channel and left c
summed.

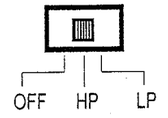


Active Dividing Network Mode Selector Switches ③ and

a) Set to the "LP" position when the amplifier is used for the
(subwoofer) system. The frequencies higher than 80 Hz v
rate of 18 dB per octave).



b) Set to the "HP" position when the 3555 is used for the hig
midrange) system. The frequencies lower than 80 Hz will
of 18 dB per octave).



CONNECTIONS

note Turn-On Lead (Blue/White)

nnect this lead to the remote turn-on or power antenna (positive ger, (+) 12V only) lead of your head unit.

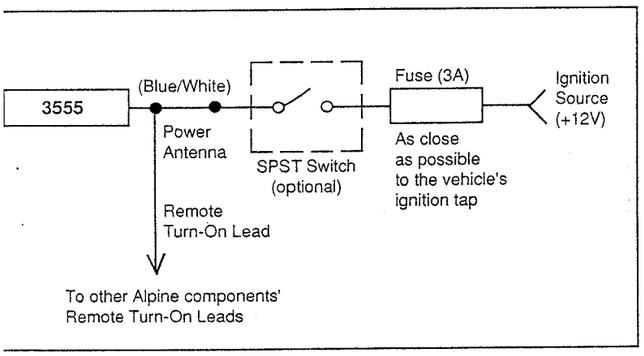
ase check your head unit for the conditions listed below:

The head unit does not have a remote turn-on or power antenna lead.

The head unit's power antenna lead is activated only when the radio is on (turns off in the tape or CD Mode).

The head unit's power antenna lead is logic level output (+) 5V, negative trigger (grounding type), or cannot sustain (+) 12V when connected to other equipment in addition to the vehicle's power antenna. If any of the above conditions exist, the remote turn-on lead of your 3555 must be connected to a switched power source (ignition) in the vehicle. Be sure to use a 3A fuse as close as possible to this ignition tap. Using this connection method, the 3555 will turn on and stay on as long as the ignition switch is on.

iis is objectionable, a SPST (Single pole, Single Throw) switch, in lition to the 3A fuse mentioned above, may be installed in-line on the 5 turn-on lead. This switch will then be used to turn on (and off) the 5. Therefore, the switch should be mounted so that is accessible by driver. Make sure the switch is turned off when the vehicle is not ning. Otherwise, the amplifier will remain on and drain the battery.

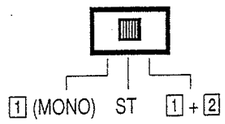


SWITCH SETTINGS

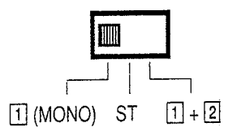
Input Mode Selector Switches ④ and ⑦

The switch modes shown are for CH1/2. Same explanations apply to mode selection for CH3/4.

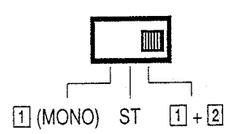
a) Set to the "ST" position (center) when the two channels are used in stereo.



b) Set to the "1 (MONO)" position when the two channels are used for one channel of a stereo or bridged system.

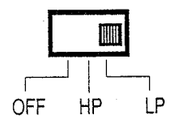


c) Set to the "1 + 2" position when the two channels are used for a subwoofer system which uses the right channel and left channel signals summed.

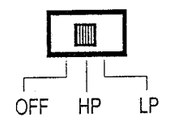


Active Dividing Network Mode Selector Switches ③ and ⑥

a) Set to the "LP" position when the amplifier is used for the low-pass (subwoofer) system. The frequencies higher than 80 Hz will be cut (at a rate of 18 dB per octave).

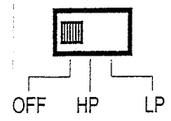


b) Set to the "HP" position when the 3555 is used for the high-pass (tweeter/ midrange) system. The frequencies lower than 80 Hz will be cut (at a rate of 18 dB per octave).



SWITCH SETTINGS

c) Set to the "OFF" position when the 3555 is used for the regular stereo system with full-range speakers. The full bandwidth will be output without cutting the high or low frequencies



Input Gain Adjustment Controls ② and ⑤

After setting your head unit's volume control 1/4 of a turn down from the maximum output level, rotate the Input Gain Adjustment Controls ② and ⑤ with a #0 flat blade screwdriver and adjust the input gain to the point where there is maximum volume with no distortion.

Status Monitor

This indicator lights in green when the power is on. The 3555 has built-in protection circuitry. If, for some reason, this protection circuit is activated, the indicator turns orange. If this happens, turn the system off, find the cause of the problem and remedy the situation. This includes checking all your connections and wiring. If the indicator remains orange when the system is turned on, consult your authorized Alpine dealer.

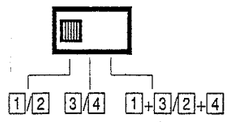
NOTE:
The indicator will illuminate in orange for a few seconds when the power is turned on as the turn on muting circuit is activated. This is normal.

Input Channel Selector Switch ⑧ (CH 3/4)

a) Setting this switch to 1/2 will send the signal at the inputs of CH1/2 to CH3/4 of the 3555. This eliminates the need for Y-adaptors when using a head unit with a single pair of pre-amp outputs.

b) Set this switch to 3/4 to have the inputs of CH3/4 accept independent input signals. An example of this application would be the use of a head unit with dual pre-amp outputs.

c) Setting this switch to 1+3/2+4 will sum the CH1 & CH3 input and send it to CH3 while the CH2 & CH4 inputs are summed and sent to CH4. When used with a dual-preamp output head unit, this will provide a non-fading (constant bass) subwoofer output with fadable front and rear outputs going to a separate satellite amplifier.



SWITCH SETTINGS

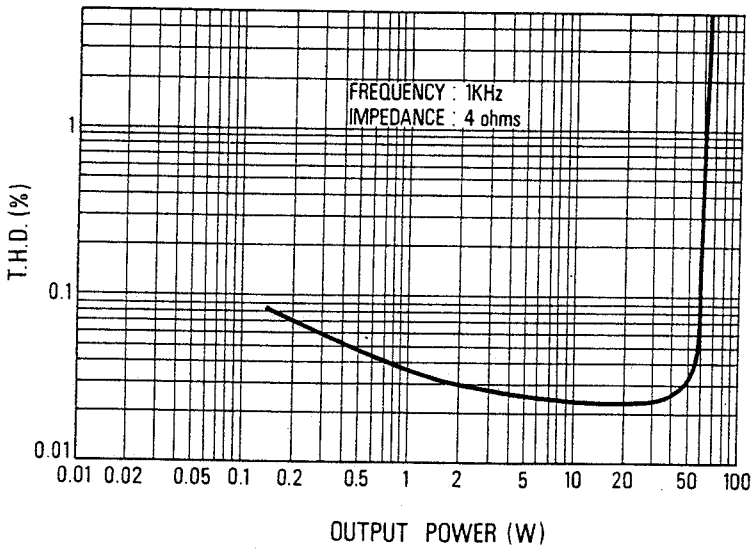
Acoustic Compensation Selector Switch

a) Turn this switch on to compensate for the loss of low bass and to reduce midbass boominess.

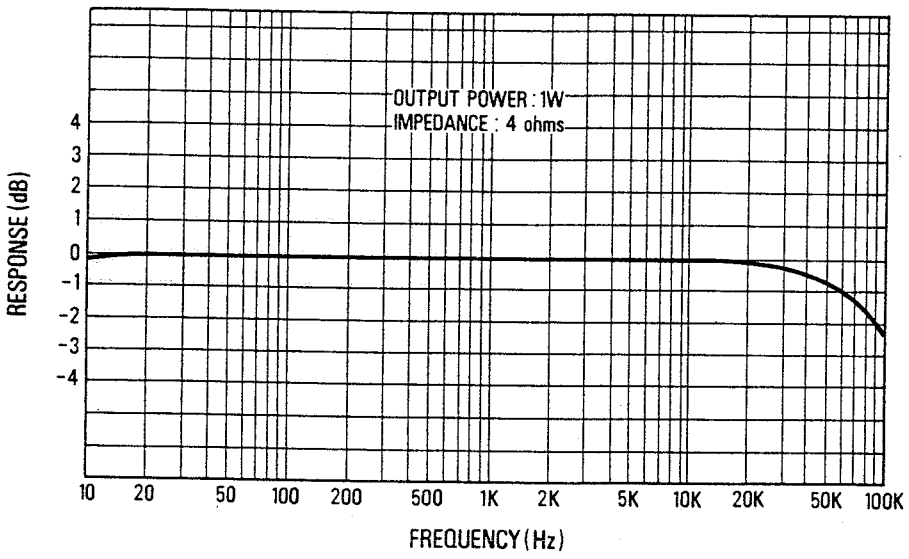
b) Listen to the system with the switch in both the ON and OFF positions. Since the response of the system can vary depending on vehicle type, interior size, and other characteristics of the listening area, choose the position that provides the best sound reproduction.

CHARACTERISTIC CURVES

POWER VS. DISTORTION CURVE



FREQUENCY RESPONSE CURVE



Disassembly Instructions

1. Removal of AMP P.C.Board

(1) After removal of Bottom Cover, remove thirty-three screws marked "●", and remove Solder A and a screw marked "□" as shown in Figure 1.

(2) AMP P.C.Board with Rear Chassis and Power P.C.Board, Output P.C.Board, RCA P.C.Board can be removed completely.

(3) After removal of two pieces of Fuse, remove nine screws marked "■" and four Hooks as shown in Figure 2 and 3.

(4) After removal of Rear Chassis, remove Solder B as shown in Figure 2.

(5) AMP P.C.Board with Power P.C.Board and Output P.C.Board, RCA P.C.Board can be removed completely.

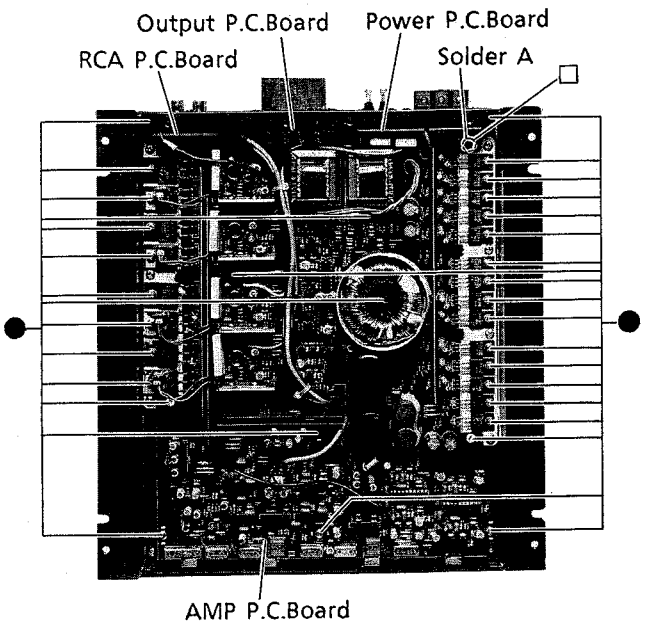


Figure 1

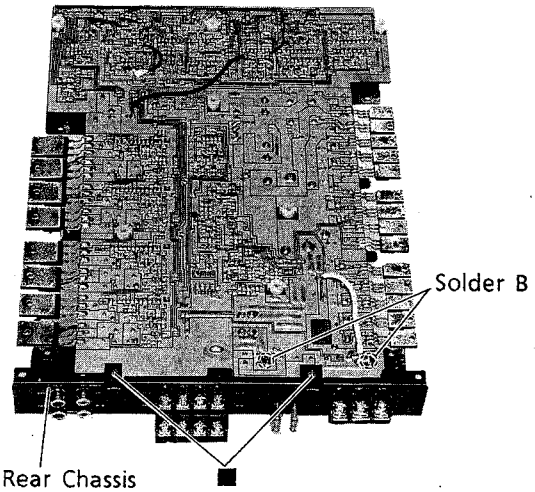


Figure 2

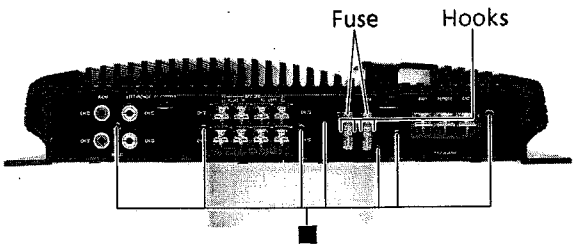
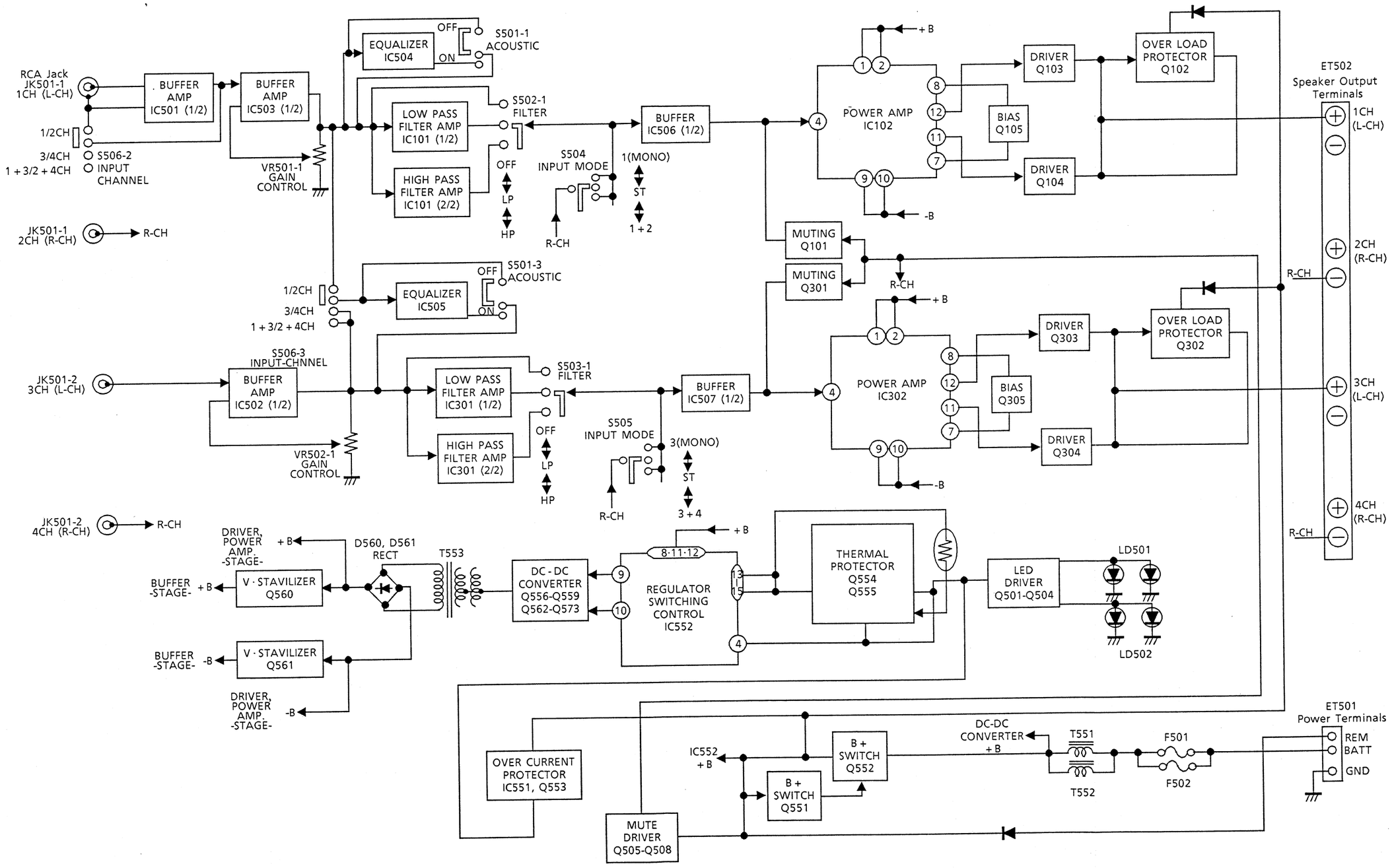
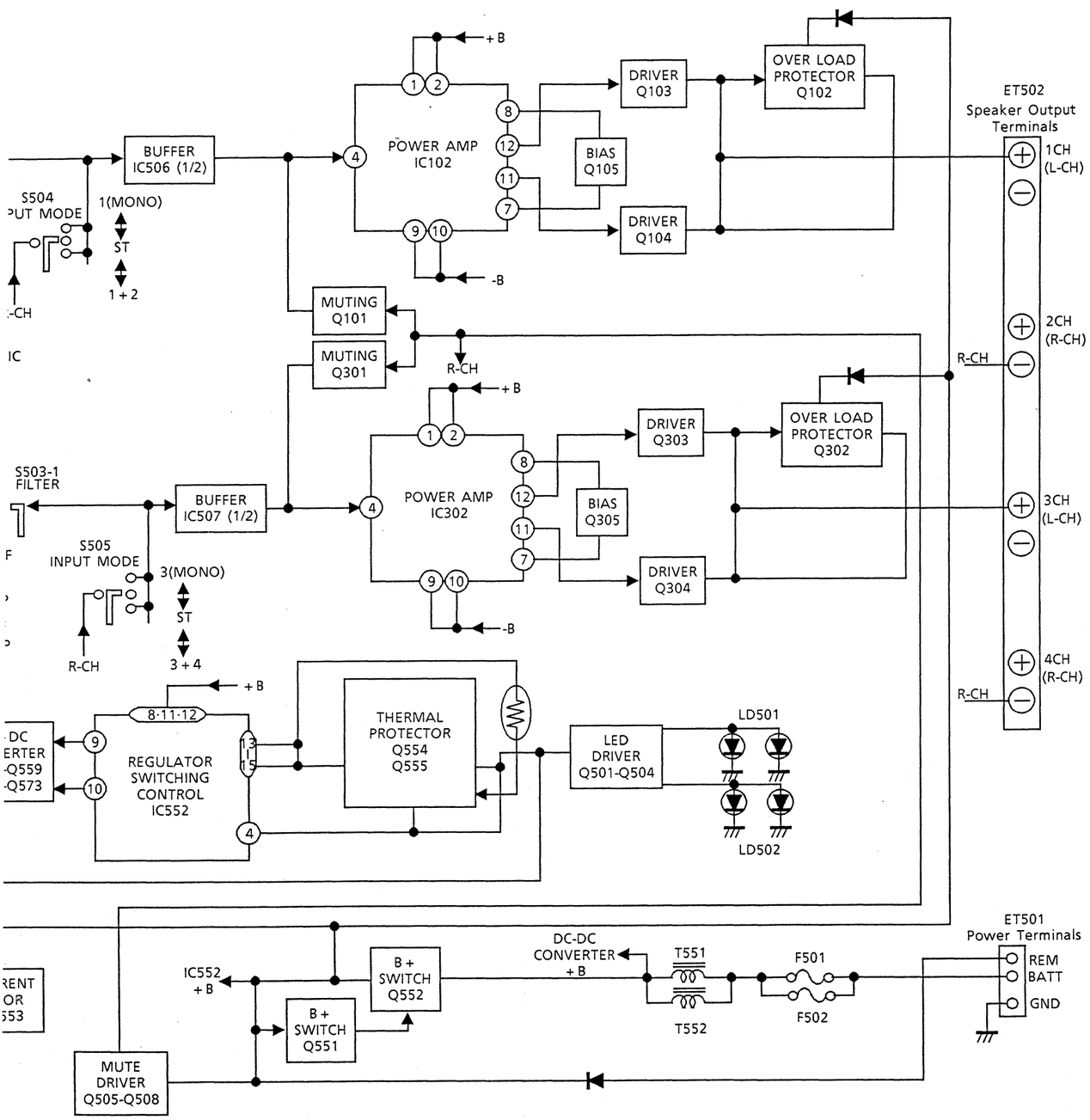


Figure 3

Block Diagram



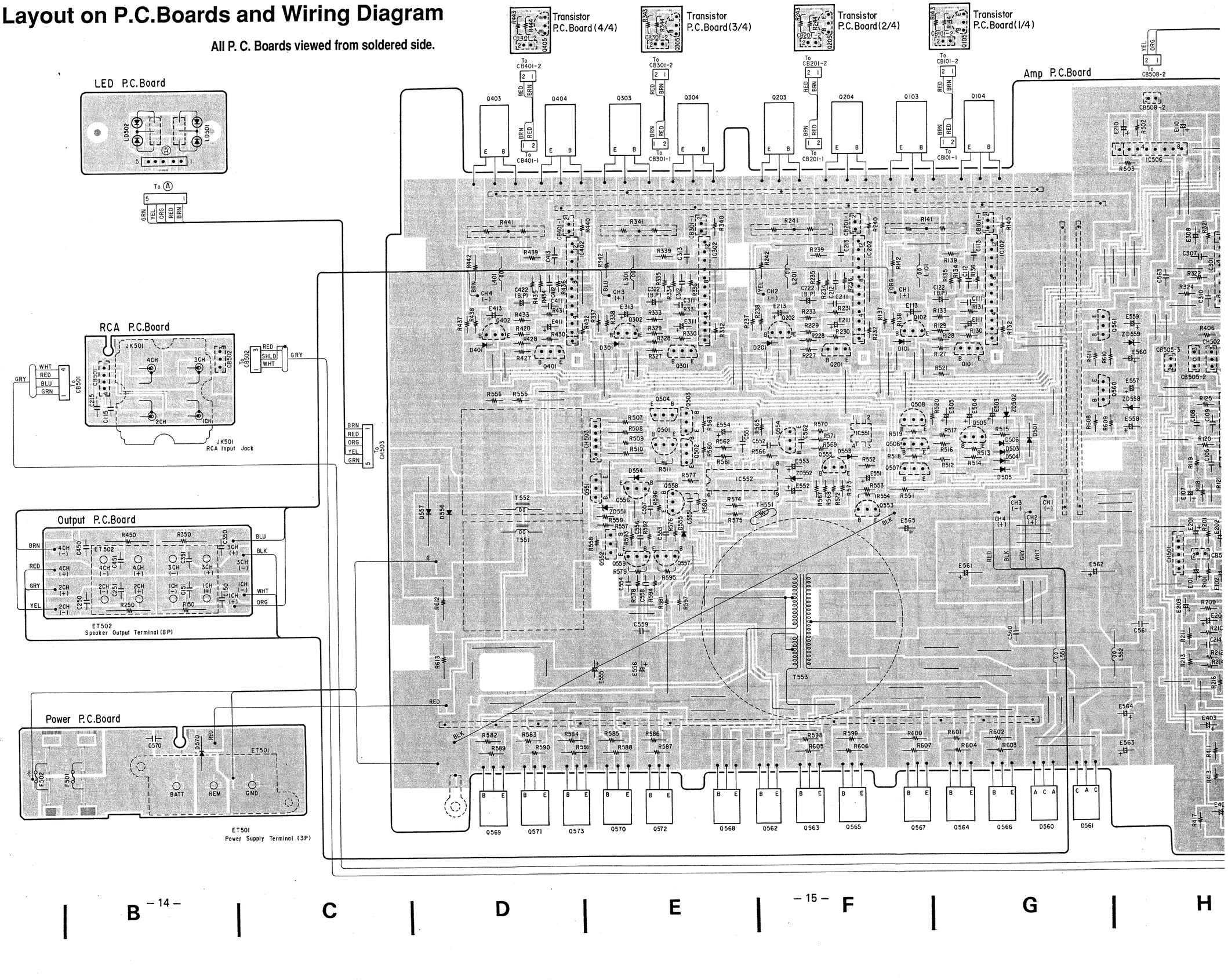

+B
1
2
8
12
11
7
9
10
-B
POWER AMP
IC102
BIAS
Q105
DRIVER
Q103
DRIVER
Q104
OVER LOAD
PROTECTOR
Q102
BUFFER
IC506 (1/2)
4
S504
PUT MODE
1(MONO)
ST
1 + 2
-CH
IC
MUTING
Q101
MUTING
Q301
R-CH
+B
POWER AMP
IC302
BIAS
Q305
DRIVER
Q303
DRIVER
Q304
OVER LOAD
PROTECTOR
Q302
S503-1
FILTER
BUFFER
IC507 (1/2)
S505
INPUT MODE
3(MONO)
ST
R-CH
3 + 4
ET502
Speaker Output
Terminals
1CH
(L-CH)
2CH
(R-CH)
R-CH
3CH
(L-CH)
4CH
(R-CH)
R-CH
+B
8·11·12
DC
ERTER
Q559
Q573
9
10
REGULATOR
SWITCHING
CONTROL
IC552
13
15
4
THERMAL
PROTECTOR
Q554
Q555
LED
DRIVER
Q501-Q504
LD501
LD502
RENT
OR
553
IC552
+B
B +
SWITCH
Q552
B +
SWITCH
Q551
DC-DC
CONVERTER
+B
T551
T552
F501
F502
ET501
Power Terminals
REM
BATT
GND
MUTE
DRIVER
Q505-Q508

MEMO

3555

Parts Layout on P.C.Boards and Wiring Diagram

All P. C. Boards viewed from soldered side.



gram

d side.

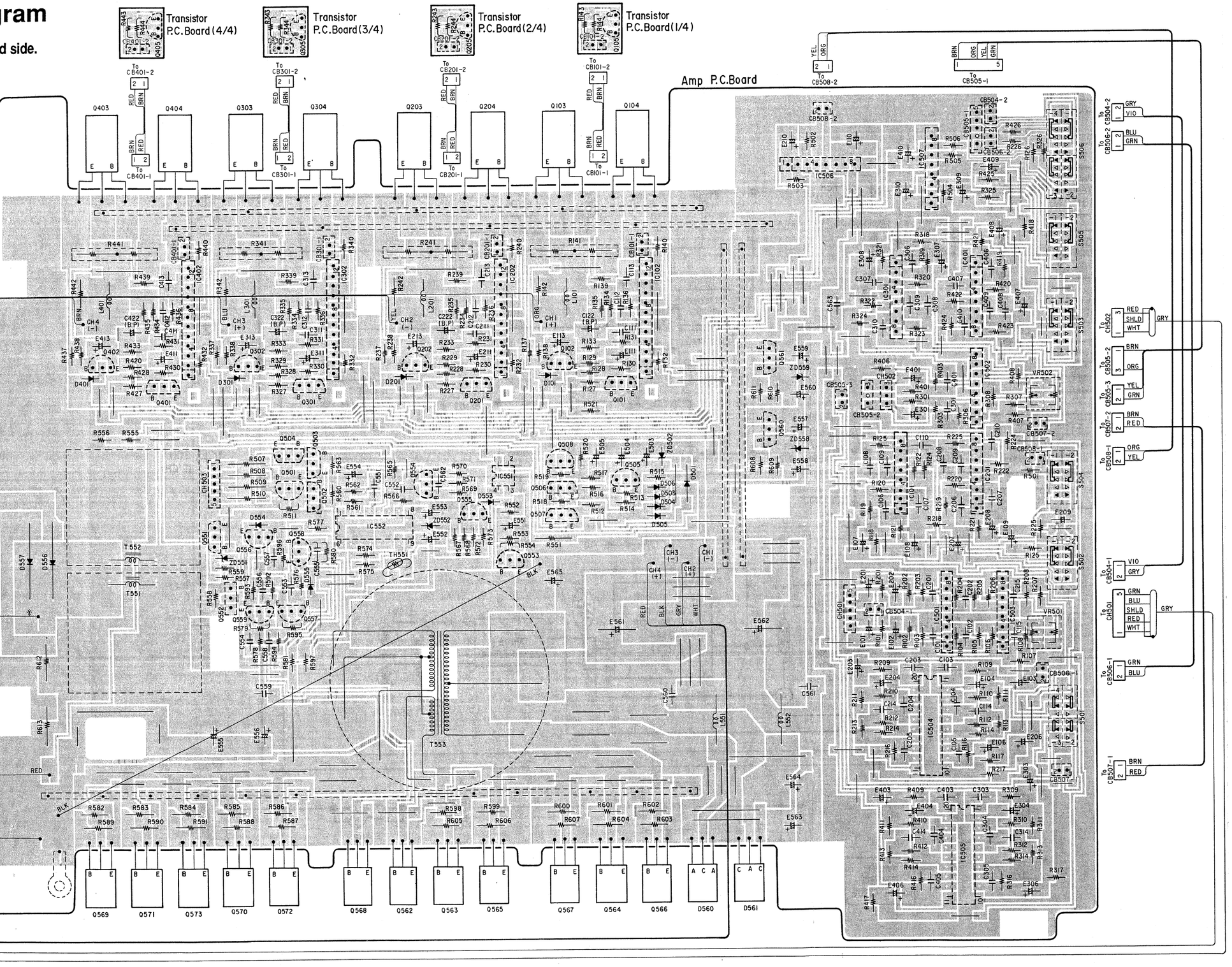
Transistor P.C.Board (4/4)

Transistor P.C.Board (3/4)

Transistor P.C.Board (2/4)

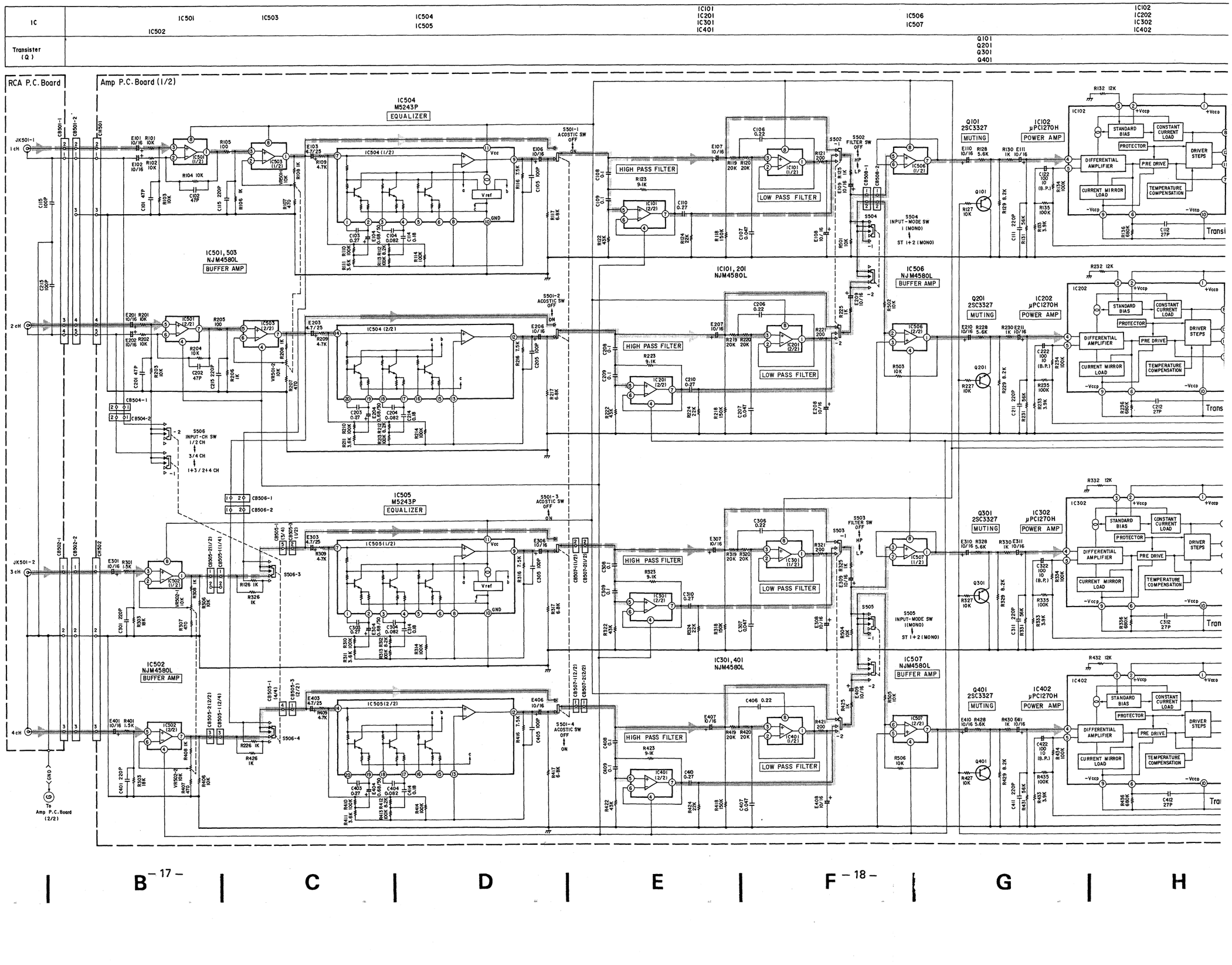
Transistor P.C.Board (1/4)

Amp P.C.Board

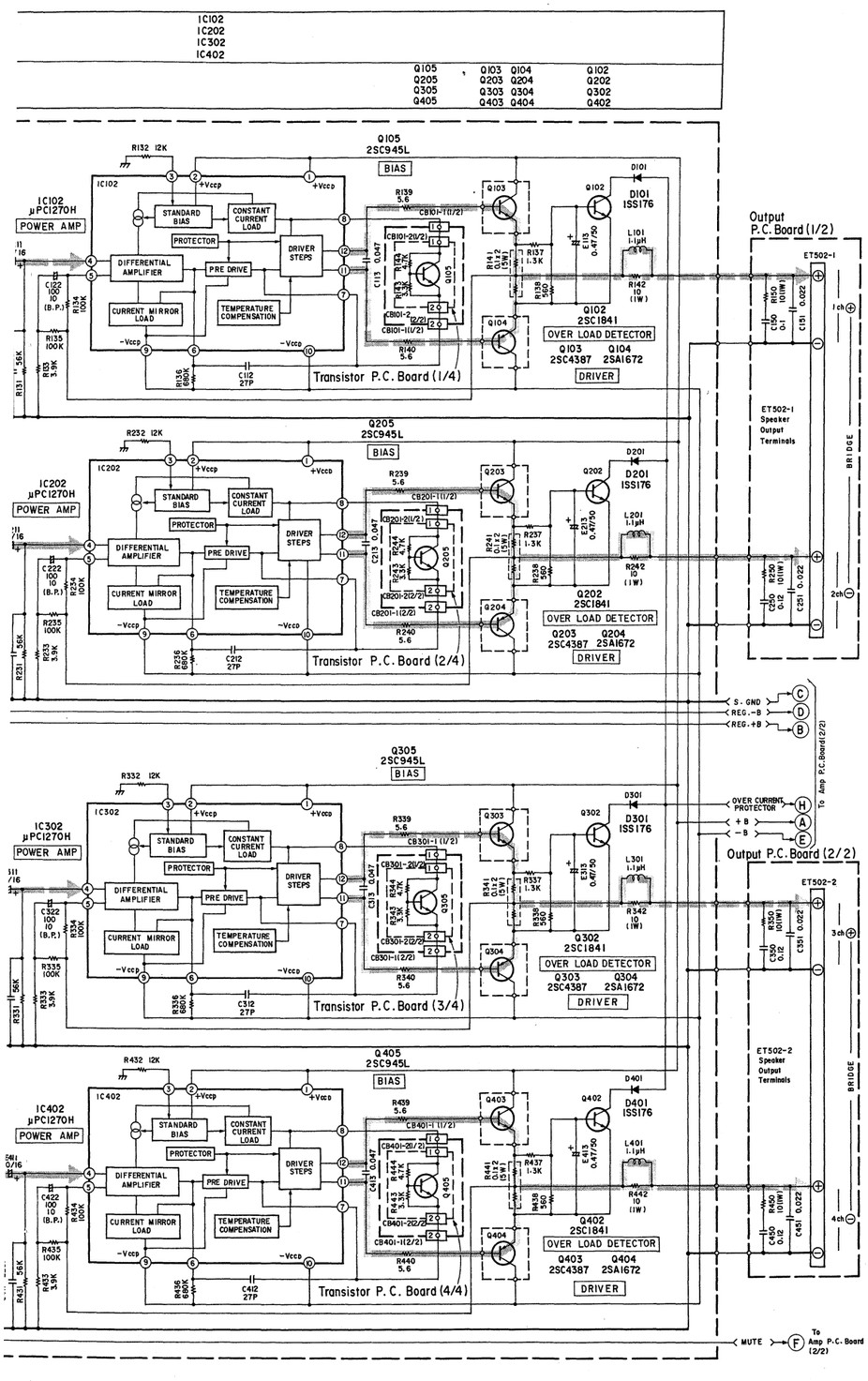


D E F G H I J K L

Schematic Diagram (1/2)



NOTE:
1. All resistance values are in ohms. K= 1,000 M= 1,000,000
2. All capacitance values are in microfarads. P= 1/1,000,000



IC	IC101	IC201	IC301	IC401
Pin	Voltage	Voltage	Voltage	Voltage
1	0V	0V	0V	0V
2	0V	0V	0V	0V
3	0V	0V	0V	0V
4	–15.5V	–15.5V	–15.5V	–15.5V
5	0V	0V	0V	0V
6	0V	0V	0V	0V
7	0V	0V	0V	0V
8	15.5V	15.5V	15.5V	15.5V

IC	IC102	IC202	IC302	IC402
Pin	Voltage	Voltage	Voltage	Voltage
1	32V	32V	32V	32V
2	32V	32V	32V	32V
3	26V	26V	26V	26V
4	0.16V	0.16V	0.16V	0.16V
5	0.16V	0.16V	0.16V	0.16V
6	–30.4V	–30.4V	–30.4V	–30.4V
7	–1.2V	–1.2V	–1.2V	–1.2V
8	0.4V	0.4V	0.4V	0.4V
9	–32V	–32V	–32V	–32V
10	–32V	–32V	–32V	–32V
11	–0.6V	–0.6V	–0.6V	–0.6V
12	0.6V	0.6V	0.6V	0.6V

IC	IC504	IC505
Pin	Voltage	Voltage
1	5.4V	5.4V
2	4.8V	4.8V
3	5.4V	5.4V
4	4.8V	4.8V
5	5.4V	5.4V
6	4.8V	4.8V
7	5.5V	5.5V
8	5.5V	5.5V
9	5.5V	5.5V
10	0V	0V
11	15.5V	15.5V
12	5.5V	5.5V
13	5.5V	5.5V
14	5.5V	5.5V
15	4.8V	4.8V
16	5.4V	5.4V
17	4.8V	4.8V
18	5.4V	5.4V
19	4.8V	4.8V
20	5.4V	5.4V

IC	IC501	IC502	IC503	IC506	IC507
Pin	Voltage	Voltage	Voltage	Voltage	Voltage
1	0V	0V	0V	0V	0V
2	0V	0V	0V	0V	0V
3	0V	0V	0V	0V	0V
4	–15.5V	–15.5V	–15.5V	–15.5V	–15.5V
5	0V	0V	0V	0V	0V
6	0V	0V	0V	0V	0V
7	0V	0V	0V	0V	0V
8	15.5V	15.5V	15.5V	15.5V	15.5V

	B	C	E
Q101	MUTE OFF: 0.6V MUTE ON: –12.5V	0V	0V
Q102	0.004V	14.5V	–0.004V
Q103	0.6V	32V	0.004V
Q104	–0.6V	–32V	–0.004V
Q105	–0.6V	0.4V	–1.2V
Q201	MUTE OFF: 0.6V MUTE ON: –12.5V	0V	0V
Q202	0.004V	14.5V	–0.004V
Q203	0.6V	32V	0.004V
Q204	–0.6V	–32V	–0.004V
Q205	–0.6V	0.4V	–1.2V
Q301	MUTE OFF: 0.6V MUTE ON: –12.5V	0V	0V
Q302	0.004V	14.5V	–0.004V
Q303	0.6V	32V	0.004V
Q304	–0.6V	–32V	–0.004V
Q305	–0.6V	0.4V	–1.2V
Q401	MUTE OFF: 0.6V MUTE ON: –12.5V	0V	0V
Q402	0.004V	14.5V	–0.004V
Q403	0.6V	32V	0.004V
Q404	–0.6V	–32V	–0.004V
Q405	–0.6V	0.4V	–1.2V

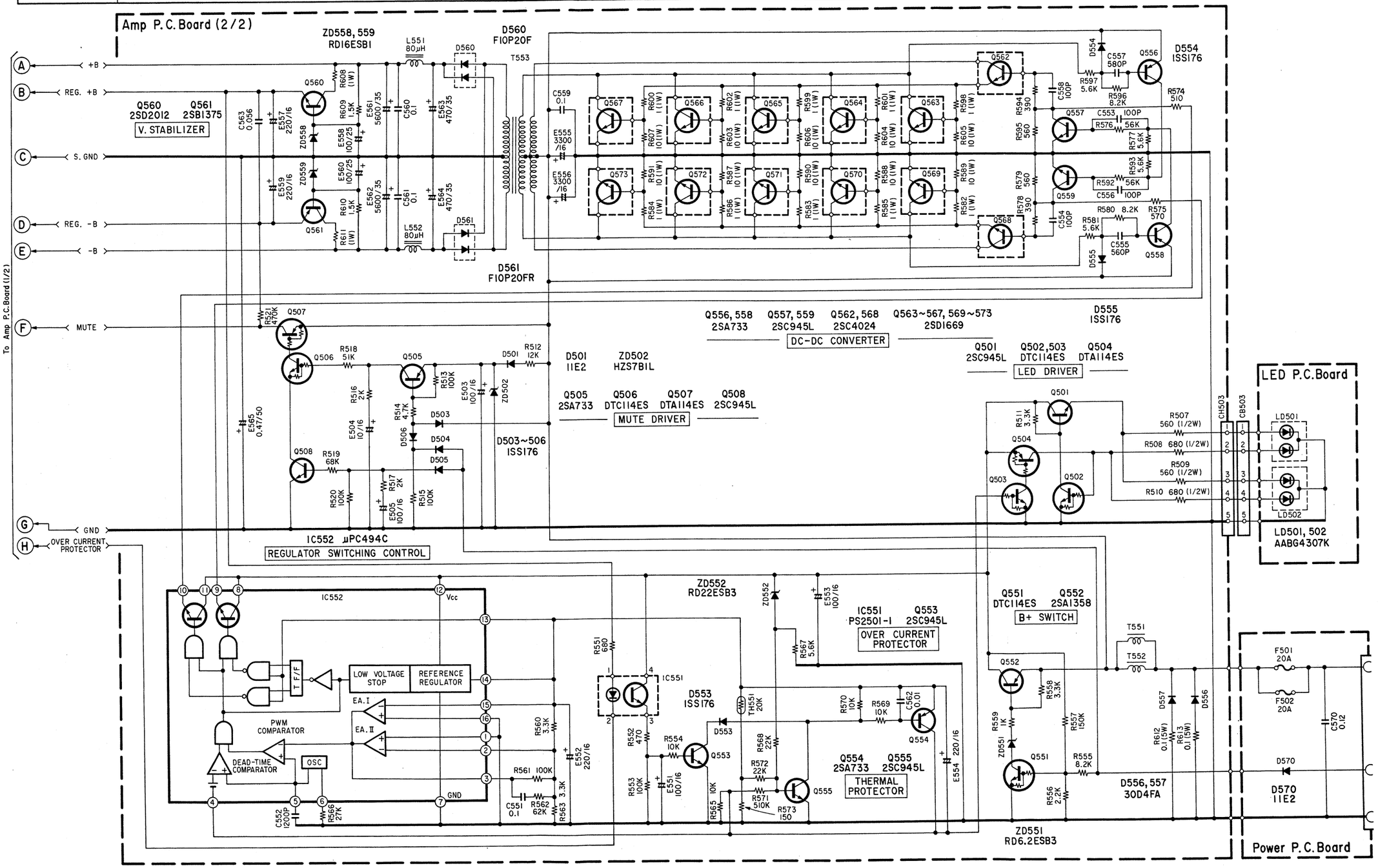
- Voltage Measuring Condition

1. Power Supply Voltage : DC14.4V
2. Measuring Meter : Digital Multi Voltmeter
3. Measuring Point Reference : Between Ground
4. Measuring Condition : No Signal Input

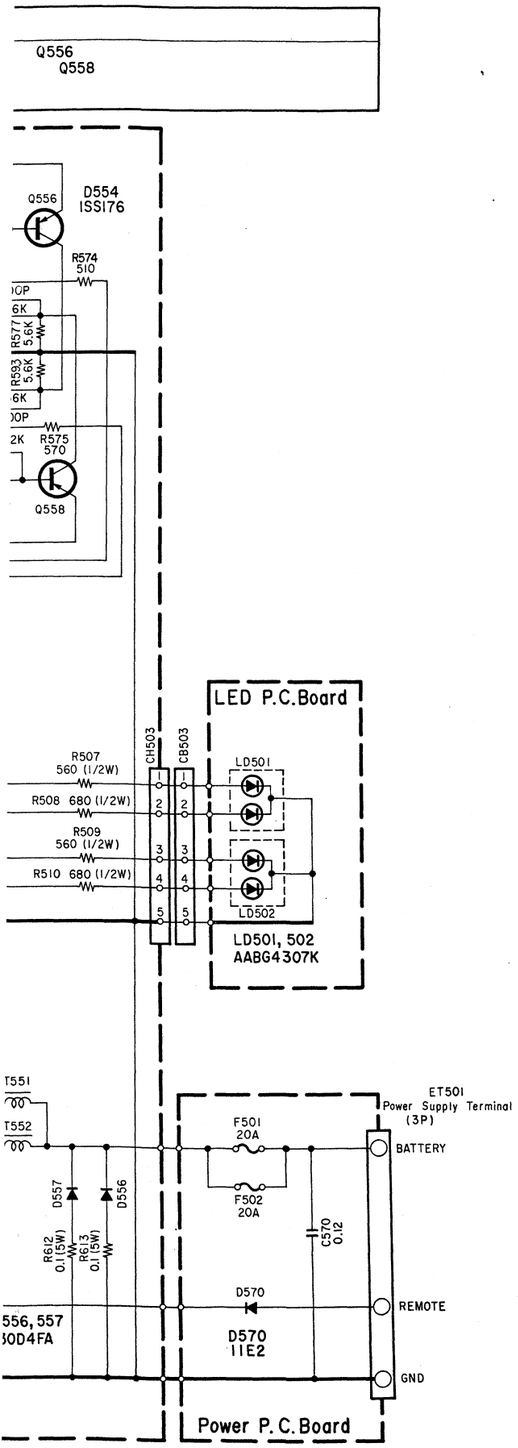
Schematic Diagram (2/2)

NOTE:
1. All resistance values are in ohms. K= 1,000 M=
2. All capacitance values are in microfarads. P= 1

IC	IC552		IC551							
Transistor (Q)	Q560 Q561 Q507 Q506 Q508	Q505	Q567 Q573	Q566 Q572 Q553	Q565 Q571 Q555	Q564 Q570	Q563 Q569 Q554	Q562 Q568 Q503 Q552	Q557 Q559 Q504 Q551 Q501 Q502	Q556 Q558



NOTE:
1. All resistance values are in ohms. K= 1,000 M= 1,000,000
2. All capacitance values are in microfarads. P= 1/1,000,000



IC551

Pin	Voltage
1	14.8V
2	14.1V
3	0V
4	14.3V

IC552

Pin	Voltage
1	0V
2	2.5V
3	0.1V
4	0.01V
5	1.7V
6	3.8V
7	0V
8	14.3V
9	6V
10	6V
11	14.3V
12	14.3V
13	5V
14	5V
15	5V
16	0V

	B	C	E
Q501	LED OFF: 0.01V LED ON: 13.8V	14.3V	LED OFF: 0.01V LED ON: 13.1V
Q502	LED OFF: 14.2V LED ON: 0V	LED OFF: 0.01V LED ON: 13.8V	0V
Q503	LED OFF: 5V LED ON: 0V	LED OFF: 0.01V LED ON: 14.3V	0V
Q504	LED OFF: 0.01V LED ON: 14.3V	LED OFF: 14.2V LED ON: 0V	14.3V
Q505	7V	MUTE OFF: 6.9V MUTE ON: 0.01V	7V
Q506	MUTE OFF: 6.8V MUTE ON: 0.01V	MUTE OFF: 0.1V MUTE ON: 14.3V	0.01V
Q507	MUTE OFF: 0.1V MUTE ON: 14.3V	MUTE OFF: 14.3V MUTE ON: −14.9V	14.4V
Q508	0.6V	0.01V	0V
Q551	2.7V	0.06V	0V
Q552	13.7V	14.38V	14.33V
Q553	0V	4.8V	0V
Q554	5V	0.01V	5V
Q555	0.04V	5V	0V
Q556	15.1V	7.3V	14.38V
Q557	−0.74V	1.36V	0V
Q558	15.1V	7.3V	14.38V
Q559	−0.74V	1.36V	0V
Q560	16V	25.5V	15.5V
Q561	−16V	−27V	−15.5V
Q562	0.7V	14.36V	0.47V
Q563	0.34V	14.38V	0V
Q564	0.34V	14.38V	0V
Q565	0.34V	14.38V	0V
Q566	0.34V	14.38V	0V
Q567	0.34V	14.38V	0V
Q568	0.7V	14.36V	0.47V
Q569	0.34V	14.38V	0V
Q570	0.34V	14.38V	0V
Q571	0.34V	14.38V	0V
Q572	0.34V	14.38V	0V
Q573	0.34V	14.38V	0V

● Voltage Measuring Condition
1. Power Supply Voltage : DC14.4V
2. Measuring Meter : Digital Multi Voltmeter
3. Measuring Point Reference : Between Ground
4. Measuring Condition : No Signal Input

Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor : μF = microfarads, pF = picofarads

Abbreviations

RES. =	Resistor	CAP. =	Capacitor
C.F. =	Carbon Film	ELY. =	Electrolytic
M.F. =	Metal Film	CER. =	Ceramic
M.O. =	Metal Oxide Film	MYL. =	Mylar
M.P. =	Metal Plate	TAN. =	Tantalum
TR. =	Transistor	POLY. =	Polystyrol
TRANS. =	Transformer	PP. =	Polypropylene
CP. =	Chip	PLT. =	Polyethylene
		PF. =	Polyester Film

AMP P. C. Board

IC's

Symbol No.	Part No.	Description
IC101	51T25576W02	NJM4580L
IC102	51E06841S01	μPC1270H
IC201	51T25576W02	NJM4580L
IC202	51E06841S01	μPC1270H
IC301	51T25576W02	NJM4580L
IC302	51E06841S01	μPC1270H
IC401	51T25576W02	NJM4580L
IC402	51E06841S01	μPC1270H
IC501	51T25576W02	NJM4580L
IC502	51T25576W02	NJM4580L
IC503	51T25576W02	NJM4580L
IC504	51T25431W01	M5243P
IC505	51T25431W01	M5243P
IC506	51T25576W02	NJM4580L
IC507	51T25576W02	NJM4580L
IC552	51T70759F01	μPC494C
IC551	51E09178S01	PS2501-1

Transistors

Symbol No.	Part No.	Description
Q101	48E06355S01	2SC3327
Q102	48E08295S01	2SC1841
Q103	48E06363S04	2SC4387
Q104	48E06364S04	2SA1672
Q201	48E06355S01	2SC3327
Q202	48E08295S01	2SC1841
Q203	48E06363S04	2SC4387
Q204	48E06364S04	2SA1672
Q301	48E06355S01	2SC3327
Q302	48E08295S01	2SC1841
Q303	48E06363S04	2SC4387
Q304	48E06364S04	2SA1672
Q401	48E06355S01	2SC3327
Q402	48E08295S01	2SC1841
Q403	48E06363S04	2SC4387
Q404	48E06364S04	2SA1672
Q501	48S44578J02	2SC945L
Q502	48E09189S02	DTC114ES
Q503	48E09189S02	DTC114ES
Q504	48E09189S01	DTA114ES
Q505	48T40081T02	2SA733
Q506	48E08748S01	DTC144ES
Q507	48E08748S02	DTA144ES
Q508	48S44578J02	2SC945L
Q551	48E09189S02	DTC114ES
Q552	48T70761F01	2SA1358
Q553	48S44578J02	2SC945L
Q554	48T40081T02	2SA733
Q555	48S44578J02	2SC945L
Q556	48T40081T02	2SA733
Q557	48S44578J02	2SC945L
Q558	48T40081T02	2SA733
Q559	48S44578J02	2SC945L
Q560	48T94864F01	2SD2012
Q561	48T94865F01	2SB1375
Q562	48T16440W01	2SC4024
Q563	48E06359S03	2SD1669
Q564	48E06359S03	2SD1669
Q565	48E06359S03	2SD1669
Q566	48E06359S03	2SD1669
Q567	48E06359S03	2SD1669
Q568	48T16440W01	2SC4024
Q569	48E06359S03	2SD1669
Q570	48E06359S03	2SD1669
Q571	48E06359S03	2SD1669
Q572	48E06359S03	2SD1669
Q573	48E06359S03	2SD1669

Diodes

Symbol No.	Part No.	Description
D101	48T58583F01	1SS176
D201	48T58583F01	1SS176
D301	48T58583F01	1SS176
D401	48T58583F01	1SS176
D501	48E02081S01	11E2
D503	48T58583F01	1SS176
D504	48T58583F01	1SS176
D505	48T58583F01	1SS176
D506	48T58583F01	1SS176
D553	48T58583F01	1SS176
D554	48T58583F01	1SS176
D555	48T58583F01	1SS176

Symbol No.	Part No.	Description
D556	48T68079F03	30D4FA
D557	48T68079F03	30D4FA
D560	48E09190S01	F10P20F
D561	48E09190S02	F10P20FR
ZD502	48T25766W13	Zener, HZS7B1L
ZD551	48T68702F31	Zener, RD6.2ESB3
ZD552	48T68702F68	Zener, RD22ESB1
ZD558	48T68702F59	Zener, RD16ESB1
ZD559	48T68702F59	Zener, RD16ESB1
Coils / Thermistor		
L101	24E06338S01	1.1μH
L201	24E06338S01	1.1μH
L301	24E06338S01	1.1μH
L401	24E06338S01	1.1μH
L551	24E07941S01	Choke
L552	24E07941S01	Choke
TH551	48E06365S01	Thermistor, 20Kohm
Transformers		
T551	25E06343S01	Choke
T552	25E06343S01	Choke
T553	25E06341S01	Power
Switches		
S501	40E09137S01	SSSF14 (ACOUSTIC COMPENSATION)
S502	40E09138S01	SSSF12 (INPUT MODE)
S503	40E09138S01	SSSF12 (INPUT MODE)
S504	40E09138S01	SSSF12 (FILTER)
S505	40E09138S01	SSSF12 (FILTER)
S506	40E09136S01	SSSF14 (INPUT CHANNEL)
Capacitors		
C101	21E07287S01	CER., 47pF
E101	23E06854S01	ELY., 10μF / 16V
C102	21E07287S01	CER., 47pF
E102	23E06854S01	ELY., 10μF / 16V
C103	08E09008S11	PF., 0.27μF
E103	23E04822S01	ELY., 4.7μF / 25V
C104	08E09008S03	PF., 0.082μF
E104	23E07090S01	ELY., 0.68μF / 50V
C105	21E06323S01	CER., 100pF
C106	08E09008S10	PF., 0.22μF

Symbol No.	Part No.	Description
E106	23E06854S01	ELY., 10μF / 16V
C107	08E09008S14	PF., 0.047μF
E107	23E06854S01	ELY., 10μF / 16V
C108	08E09008S06	PF., 0.1μF
E108	23E06854S01	ELY., 10μF / 16V
C109	08E09008S06	PF., 0.1μF
E109	23E06854S01	ELY., 10μF / 16V
C110	08E09008S11	PF., 0.27μF
E110	23E06854S01	ELY., 10μF / 16V
C111	21E06324S01	CER., 220pF
E111	23E06854S01	ELY., 10μF / 16V
C112	21E07286S02	CER., 27pF
C113	08E09008S14	PF., 0.047μF
E113	23E04826S01	ELY., 0.47μF / 50V
C114	08E09008S12	PF., 0.18μF
C115	21E06324S01	CER., 220pF
C122	23E06330S01	ELY., (B.P) 100μF / 10V
C201	21E07287S01	CER., 47pF
E201	23E06854S01	ELY., 10μF / 16V
C202	21E07287S01	CER., 47pF
E202	23E06854S01	ELY., 10μF / 16V
C203	08E09008S11	PF., 0.27μF
E203	23E04822S01	ELY., 4.7μF / 25V
C204	08E09008S03	PF., 0.082μF
E204	23E07090S01	ELY., 0.68μF / 50V
C205	21E06323S01	CER., 100pF
C206	08E09008S10	PF., 0.22μF
E206	23E06854S01	ELY., 10μF / 16V
C207	08E09008S14	PF., 0.047μF
E207	23E06854S01	ELY., 10μF / 16V
C208	08E09008S06	PF., 0.1μF
E208	23E06854S01	ELY., 10μF / 16V
C209	08E09008S06	PF., 0.1μF
E209	23E04938S02	ELY., 10μF / 16V
C210	08E09008S11	PF., 0.27μF
E210	23E06854S01	ELY., 10μF / 16V
C211	21E06324S01	CER., 220pF
E211	23E06854S01	ELY., 10μF / 16V
C212	21E07286S02	CER., 27pF
C213	08E09008S14	PF., 0.047μF
E213	23E04826S01	ELY., 0.47μF / 50V
C214	08E09008S12	PF., 0.18μF
C215	21E06324S01	CER., 220pF
C222	23E06330S01	ELY., (B.P) 100μF / 10V
C301	21E06324S01	CER., 220pF
E301	23E06854S01	ELY., 10μF / 16V
C303	08E09008S11	PF., 0.27μF
E303	23E04822S01	ELY., 4.7μF / 25V
C304	08E09008S03	PF., 0.082μF
E304	23E07090S01	ELY., 0.68μF / 50V
C305	21E06323S01	CER., 100pF
C306	08E09008S10	PF., 0.22μF

Symbol No.	Part No.	Description
E306	23E06854S01	ELY., 10μF/16V
C307	08E09008S14	PF., 0.047μF
E307	23E06854S01	ELY., 10μF/16V
C308	08E09008S06	PF., 0.1μF
E308	23E06854S01	ELY., 10μF/16V
C309	08E09008S06	PF., 0.1μF
E309	23E06854S01	ELY., 10μF/16V
C310	08E09008S11	PF., 0.27μF
E310	23E06854S01	ELY., 10μF/16V
C311	21E06324S01	CER., 220pF
E311	23E06854S01	ELY., 10μF/16V
C312	21E07286S02	CER., 27pF
C313	08E09008S14	PF., 0.047μF
E313	23E04826S01	ELY., 0.47μF/50V
C314	08E09008S12	PF., 0.18μF
C322	23E06330S01	ELY., (B.P) 100μF/10V
C401	21E06324S01	CER., 220pF
E401	23E06854S01	ELY., 10μF/16V
C403	08E09008S11	PF., 0.27μF
E403	23E04822S01	ELY., 4.7μF/25V
C404	08E09008S03	PF., 0.082μF
E404	23E07090S01	ELY., 0.68μF/50V
C405	21E06323S01	CER., 100pF
C406	08E09008S10	PF., 0.22μF
E406	23E06854S01	ELY., 10μF/16V
C407	08E09008S14	PF., 0.047μF
E407	23E06854S01	ELY., 10μF/16V
C408	08E09008S06	PF., 0.1μF
E408	23E06854S01	ELY., 10μF/16V
C409	08E09008S06	PF., 0.1μF
E409	23E06854S01	ELY., 10μF/16V
C410	08E09008S11	PF., 0.27μF
E410	23E06854S01	ELY., 10μF/16V
C411	21E06324S01	CER., 220pF
E411	23E06854S01	ELY., 10μF/16V
C412	21E07286S02	CER., 27pF
E413	23E04826S01	ELY., 0.47μF/50V
C413	08E09008S14	PF., 0.047μF
C414	08E09008S12	PF., 0.18μF
C422	23E06330S01	ELY., (B.P) 100μF/10V
E503	23E04833S01	ELY., 100μF/16V
E504	23E06854S01	ELY., 10μF/16V
E505	23E04833S01	ELY., 100μF/16V
C551	08E09008S06	PF., 0.1μF
E551	23E04833S01	ELY., 100μF/16V
C552	08E09151S06	MYL., 1200pF
E552	23E04836S01	ELY., 220μF/10V
C553	21E06323S01	CER., 100pF
E553	23E04833S01	ELY., 100μF/16V
C554	21E06323S01	CER., 100pF
E554	23E04836S01	ELY., 220μF/10V
C555	21E06325S01	CER., 560pF

Symbol No.	Part No.	Description
E555	23E08297S02	ELY., 3300μF/16V
C556	21E06323S01	CER., 100pF
E556	23E08297S02	ELY., 3300μF/16V
C557	21E06325S01	CER., 560pF
E557	23E08793S03	ELY., 220μF/16V
C558	21E06323S01	CER., 100pF
E558	23E08794S01	ELY., 100μF/25V
C559	08E09008S06	PF., 0.1μF
E559	23E08793S03	ELY., 220μF/16V
C560	08E09008S06	PF., 0.1μF
E560	23E08794S01	ELY., 100μF/25V
C561	08E09008S06	PF., 0.1μF
E561	23E09187S02	ELY., 5600μF/35V
C562	08E09151S02	MLY., 0.01μF
E562	23E09187S02	ELY., 5600μF/35V
C563	08E09008S01	PF., 0.056μF
E563	23E08302S01	ELY., 470μF/35V
E564	23E08302S01	ELY., 470μF/35V
E565	23E04826S01	ELY., 0.47μF/50V

Resistors

R141	17E09460S01	Cement,0.1ohm ×2
R142	06E06383S01	SPR, 10 ohm 1W
R241	17E09460S01	Cement,0.1ohm ×2
R242	06E06383S01	SPR, 10 ohm 1W
R341	17E09460S01	Cement,0.1ohm ×2
R342	06E06383S01	SPR, 10 ohm 1W
R441	17E09460S01	Cement,0.1ohm ×2
R442	06E06383S01	SPR, 10 ohm 1W
R507	06E07006S02	C.F., 560 ohm 1/2W
R508	06E03962S01	C.F., 680 ohm 1/2W
R509	06E07006S02	C.F., 560 ohm 1/2W
R510	06E03962S01	C.F., 680 ohm 1/2W
R551	06E03962S01	C.F., 680 ohm 1/2W
R582	06E06382S01	SPR, 1 ohm 1W
R583	06E06382S01	SPR, 1 ohm 1W
R584	06E06382S01	SPR, 1 ohm 1W
R585	06E06382S01	SPR, 1 ohm 1W
R586	06E06382S01	SPR, 1 ohm 1W
R587	06E06383S01	SPR, 10 ohm 1W
R588	06E06383S01	SPR, 10 ohm 1W
R589	06E06383S01	SPR, 10 ohm 1W
R590	06E06383S01	SPR, 10 ohm 1W
R591	06E06383S01	SPR, 10 ohm 1W
R598	06E06382S01	SPR, 1 ohm 1W
R599	06E06382S01	SPR, 1 ohm 1W

Symbol No.	Part No.	Description
R600	06E06382S01	SPR, 1 ohm 1W
R601	06E06382S01	SPR, 1 ohm 1W
R602	06E06382S01	SPR, 1 ohm 1W
R603	06E06383S01	SPR, 10 ohm 1W
R604	06E06383S01	SPR, 10 ohm 1W
R605	06E06383S01	SPR, 10 ohm 1W
R606	06E06383S01	SPR, 10 ohm 1W
R607	06E06383S01	SPR, 10 ohm 1W
R608	06E06384S01	SPR, 100 ohm 1W
R611	06E06384S01	SPR, 100 ohm 1W
R612	17E08299S01	Cement, 0.1 ohm
R613	17E08299S01	Cement, 0.1 ohm
VR501	18E09602S01	10K ohm ×2
VR502	18E09602S01	10K ohm ×2

Output P. C. Board

Capacitors

C150	08E09008S06	PF., 0.1μF
C151	08E09008S16	PF., 0.022μF
C250	08E09008S06	PF., 0.1μF
C251	08E09008S16	PF., 0.022μF
C350	08E09008S06	PF., 0.1μF
C351	08E09008S16	PF., 0.022μF
C450	08E09008S06	PF., 0.1μF
C451	08E09008S16	PF., 0.022μF

Resistors

R150	06E06383S01	SPR, 10 ohm 1W
R250	06E06383S01	SPR, 10 ohm 1W
R350	06E06383S01	SPR, 10 ohm 1W
R450	06E06383S01	SPR, 10 ohm 1W

Power P. C. Board

Diode / Capacitor

D570	48E01627S04	Diode, 11E2
C570	08E09008S04	PF., 0.082μF

Symbol No.	Part No.	Description

RCA P. C. Board

Capacitors

C115	21E03875S01	CER., 100pF
C215	21E03875S01	CER., 100pF

Transistor P. C. Board

Transistors

Q105	48S44578J02	2SC945L
Q205	48S44578J02	2SC945L
Q305	48S44578J02	2SC945L
Q405	48S44578J02	2SC945L

Miscellaneous

ET501	29E09185S01	Power Terminals
ET502	29E06476S01	Speaker Output Terminals
F501	65S58596F06	Fuse, Auto 20A (For Battery Line)
F502	65S58596F06	Fuse, Auto 20A (For Battery Line)
JK501	09E06320S01	RCA Jack
LD501	48E06366S01	LED, AABG4307K (ORG / GRN)
LD502	48E06366S01	LED, AABG4307K (ORG / GRN)

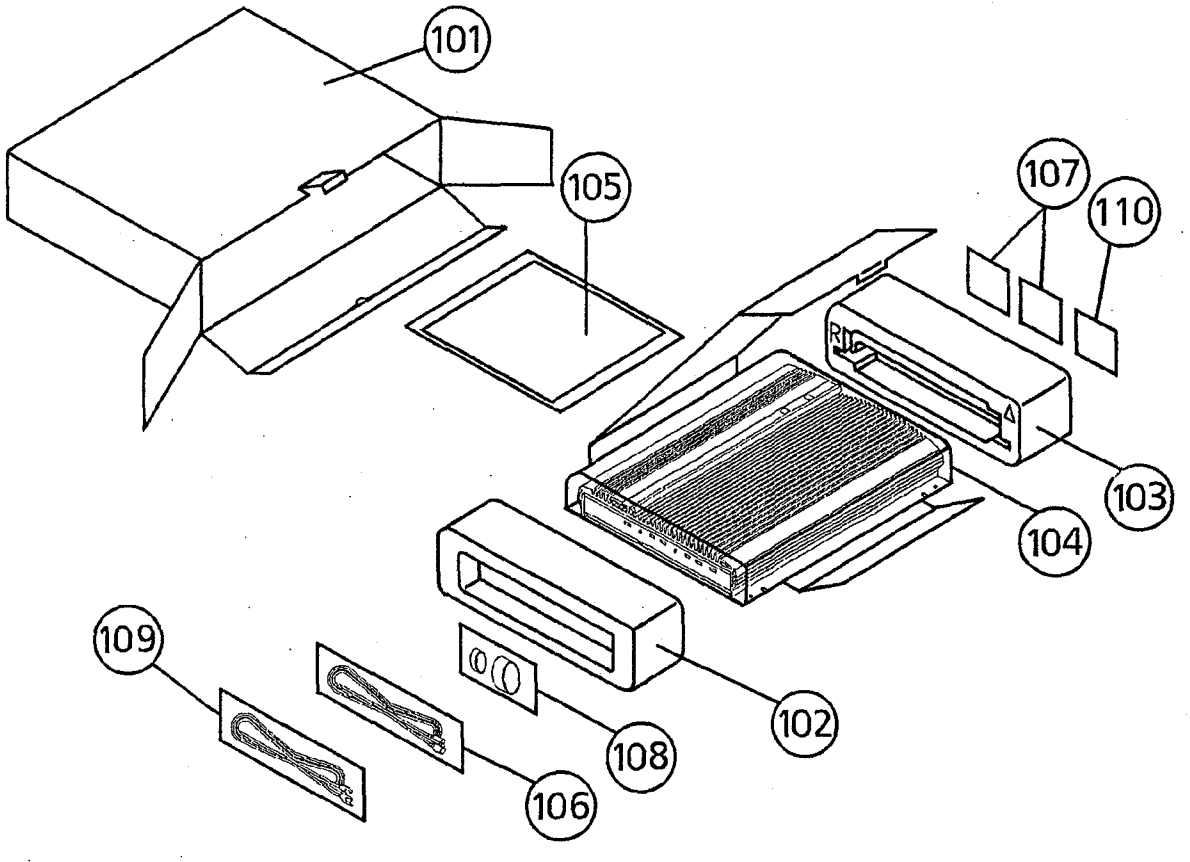
Packing Assembly Parts List

Symbol No.		Part No.	Description
○	101	56E09605S01	Carton, Packing
●	101	56E09605S01	Carton, Packing
△	101	56E09606S01	Carton, Packing
	102	56E06374S01	Tray, Packing (L)
	103	56E06375S01	Tray, Packing (R)
	104	56B72811F08	Sack, Polyethylene
○	105	68P40151W01	Owner's, Manual
●	105-1	68P40151W01	Owner's, Manual
●	105-2	68P40151W02	Owner's, Manual
△	105	68P40151W04	Owner's, Manual
	106	01E08346S01	Assy., Remote Cord
	107	65S58596F06	Fuse, Auto 20A (For Battery Line)
	108	15A81064F03	Housing Rubber

Symbol No.		Part No.	Description
○	109	01E06306S01	Assy., Power Cord
●	109	01E06306S01	Assy., Power Cord
△	109-1	01E09603S01	Assy., Power Cord
△	109-2	01E09604S01	Assy., GND Cord
	110	03E09191S01	Screw, CHTS-1 (M4×20)

Notes : ○ : North American Model Only, ● : Canadian Model Only,
△ : General Foreign Model Only, Others : Common

Packing Method View



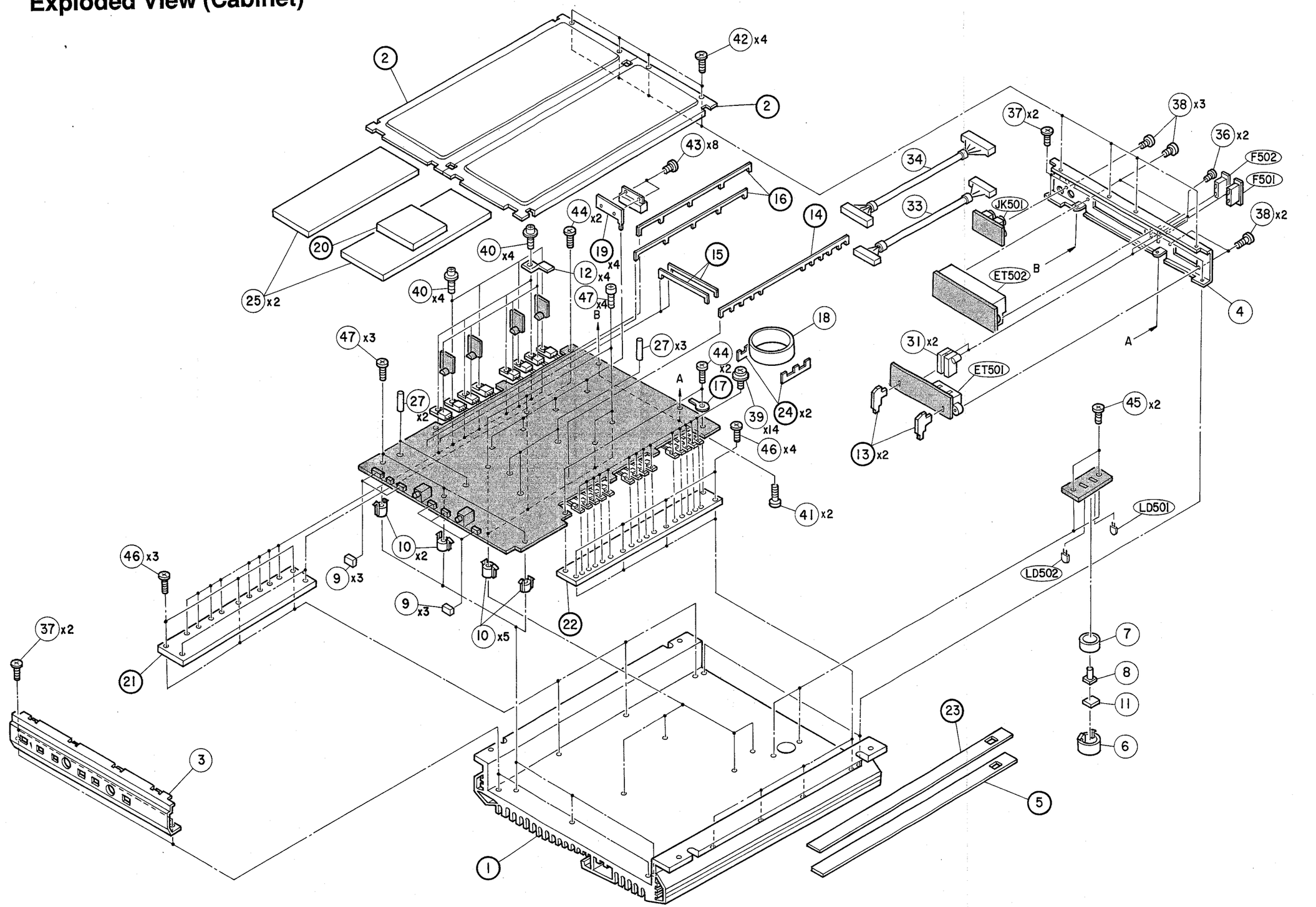
Cabinet Assembly Parts List

Note : The parts without parts list are not supplied.

Symbol No.	Index	Part No.	Description
3	5-B	27E09628S01	Chassis, Front
4	2-G	27E09629S01	Chassis, Rear
6	5-G	15E09383S01	Holder, LED
7	4-G	15E09384S01	Cover, LED
8	4-G	07E09492S01	LED Pre Base
9		36E09132S01	Knob, Switch B
10	4-C	43E08008S01	Support, P.C.Board
11	4-G	61E06376S01	Lens, LED
12	2-D	07E09494S01	Support, Transistor (B)
18	3-E	26A81610F02	Shield, CU
25	2-B	14A13430W01	Insulator, Plate
27		09E07042S01	Lead Pin
31	3-F	09E06453S01	Holder, Auto Fuse
33	2-F	01E09630S01	Assy., Connector (3P)
34	2-F	01E09631S01	Assy., Connector (5P)
36	2-G	03E08303S01	Screw, CPTS-4 (M2×6)
37		03E06480S01	Screw, CPTS-2 (M3×6)
38		03E04878S01	Screw, CPTS-2 (M3×8)
39	3-E	03E08304S01	Screw, CPTS-2 (M3×8.5)
40		03E08305S01	Screw, CPTS-2 (M3×9.5)
41		03E06492S01	Screw, CBTS-3 (M3×5)
42	1-E	03E06493S02	Screw, CFTS-3 (M3×6)
43	2-D	03E06492S02	Screw, CBTS-2 (M3×5)
44		03E08429S02	Screw, CBTS-2 (M3×6)
45	3-G	03E08429S01	Screw, CBTS-2 (M3×6)
46		03E06967S01	Screw, CBTS-2 (M3×10)
47		03E07234S01	Screw, CBTS-2 (M3×12)

Symbol No.	Index	Part No.	Description

Exploded View (Cabinet)

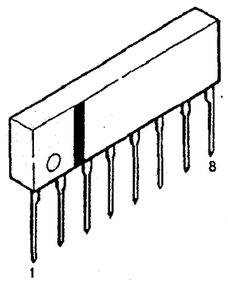


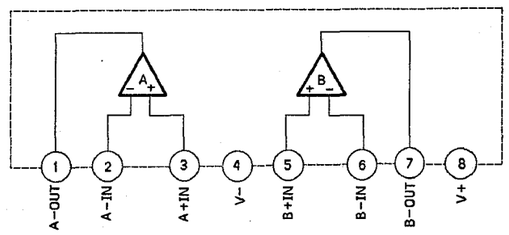
1 2 3 4 5

A | B | C | D | E | F | G | H

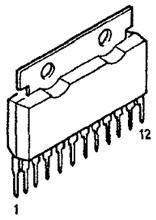
Semi - Conductor Lead Identifications

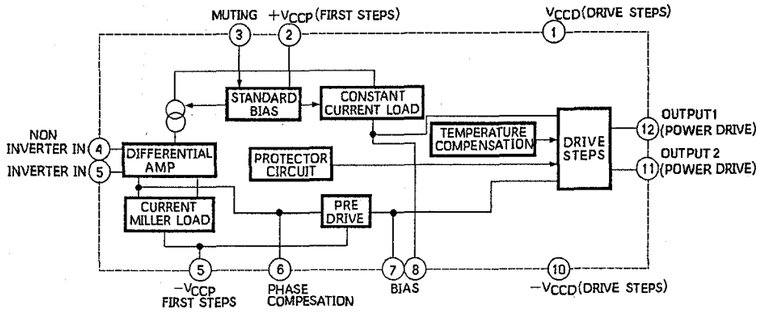
NJM4580L : IC101, 201, 301, 401, 501, 502, 503, 506, 507



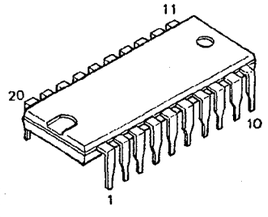


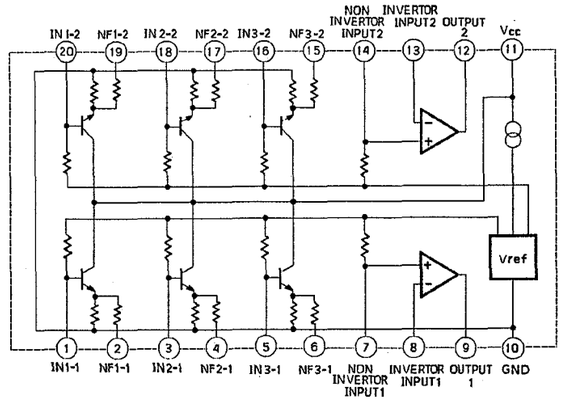
µPC1270H : IC102, 202, 302, 402



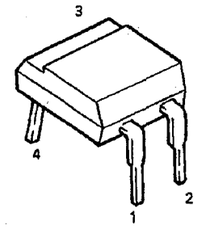


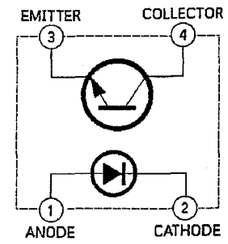
M5243P : IC504, 505





PS2501 - 1 : IC551





µPC494C : IC552